

AMENDMENTS TO THE CLAIMS

1 (currently amended): An apparatus for high efficiency gas temperature and humidity adjustment, comprising:

a cooling coil; and

a condensate water removal means for removing condensate water deposited on said cooling coil, the condensate water depositing on said cooling coil during operation of said apparatus.

2 (currently amended): An apparatus for high efficiency gas temperature and humidity adjustment, comprising:

a cooling coil; and

a means for supplying the cooling coil with at least one of deaeration water ~~or~~ and hydrogen water as cooling water.

3 (currently amended): ~~[[The]]~~ An apparatus for high efficiency gas temperature and humidity adjustment, comprising:

a cooling coil; and

a condensate water removal means for removing condensate water deposited on said cooling coil, of claim 1, wherein said condensate water removal means [[is]] being a means for spraying compressed gas to [[the]] said cooling coil.

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4 (previously presented): The apparatus for high efficiency gas temperature and humidity adjustment of claim 3, wherein the pressure of said compressed gas is 2 to 10 kgf/cm<sup>2</sup>.

a) 5 (previously presented): The apparatus for high efficiency gas temperature and humidity adjustment of claim 3, wherein said compressed gas is a cooling gas.

6 (currently amended): [[The]] An apparatus for high efficiency gas temperature and humidity adjustment, comprising:

a cooling coil; and

a condensate water removal means for removing condensate

5 water deposited on said cooling coil, of claim 1, wherein said  
condensate water removal means ~~comes~~ coming physically into  
contact with the condensate ~~water, and has~~ water and having a  
function to remove [[said]] the condensate water.

7 (previously presented): The apparatus for high efficiency gas temperature and humidity adjustment of claim 6, wherein said condensate water removal means is a brush.

8 (previously presented): The apparatus for high efficiency gas temperature and humidity adjustment of claim 7, wherein said

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brush is composed to be capable of removing said condensate water by rotation or other displacement.

9 (currently amended): ~~[[The]]~~ An apparatus for high efficiency gas temperature and humidity adjustment, comprising:

a1 a cooling coil, said cooling coil having cooling fins thereon, said cooling fins of said cooling coil being divided every one line or two lines or having slits for displacement guides disposed every one line or two lines of heat exchange fins; and

5 a condensate water removal means for removing condensate water deposited on said cooling coil. ~~of claim 1 wherein cooling fins of said cooling coil are divided every one line or two lines, or have slits for displacement guide disposed every one line or two lines of heat exchange fins.~~

10 10 (currently amended): ~~[[The]]~~ An apparatus for high efficiency gas temperature and humidity adjustment, comprising:

a cooling coil, a surface of said cooling coil being composed of a water-repellent surface; and

5 a condensate water removal means for removing condensate water deposited on said cooling coil. ~~of claim 1 wherein the~~

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~~surface of said cooling coil is composed of water-repellent surface.~~

11 (previously presented): The apparatus for high efficiency gas temperature and humidity adjustment of claim 1 comprising a means capable of spraying condensed liquid again.

12 (currently amended): [[The]] An apparatus for high efficiency gas temperature and humidity adjustment, comprising:  
a cooling coil, a surface treatment using alumite treatment film being applied to the surface of said cooling coil so that  
5 the heat transfer efficiency from the surface thereof to a gas by heat radiation can be improved; and

a condensate water removal means for removing condensate water deposited on said cooling coil. of claim 1 wherein a surface treatment using alumite treatment film or the like is  
10 applied to the surface of said cooling coil so that the heat transfer efficiency from the surface thereof to the gas by heat radiation can be improved.

13 (currently amended): [[The]] An apparatus for high efficiency gas temperature and humidity adjustment, comprising:

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a cooling coil, an ultrasonic applying apparatus for  
applying vibration by ultrasonic waves being comprised on the  
5 surface of said cooling coil; and

a condensate water removal means for removing condensate  
water deposited on said cooling coil. of claim 1 wherein an  
ultrasonic applying apparatus for applying vibration by  
a ultrasonic waves is comprised on the surface of said cooling  
10 coil.

14 (currently amended): An ~~[[The]]~~ apparatus for high  
efficiency gas temperature and humidity adjustment, comprising:

a cooling coil, a means for supplying a cooling water tube  
of said cooling coil with deaeration water; and

5 a condensate water removal means for removing condensate  
water deposited on said cooling coil of claim 1 comprising a  
means for supplying the cooling water tube of said cooling coil  
with deaeration water.

15 (currently amended): An ~~[[The]]~~ apparatus for high  
efficiency gas temperature and humidity adjustment, comprising:

a cooling coil, a means for supplying a cooling water tube  
of said cooling coil with hydrogen water; and

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5        a condensate water removal means for removing condensate  
water deposited on said cooling coil. of claim 1 comprising a  
means for supplying the cooling water tube of said cooling coil  
with hydrogen water.

16 (currently amended): A method for high efficiency gas  
temperature and humidity adjustment, the method comprising the  
steps of[[,]]:

5        letting flow cooling water in a cooling water tube of a  
cooling coil, ~~and~~ coil; and

a |        cooling a gas to be cooled by letting flow the gas to be  
cooled between cooling fins, wherein deaerated water is used as  
coil cooling water.

17 (new): An apparatus for high efficiency gas temperature  
and humidity adjustment, comprising:

a cooling coil; and

5        a condensate water removal means for at least one of  
promoting and enhancing removal of condensate water deposited on  
said cooling coil, said condensate water removal means comprising  
a surface treatment of said heating coil, said surface treatment  
at least one of causing the surface of said cooling coil to be

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18 *a* water repellent and improving the heat transfer efficiency of the  
surface of said cooling coil.

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